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(56) References cited:
**WO-A- /05345 WO-A- 0/07136
US-A- 4 016 036**

- Molecular and Cellular Biology, vol. 5, no. 1, January 1985, American Society for Microbiology (US) N.E. Hynes et al. "New acceptor cell for transfected genomic DNA: oncogene transfer into a mouse mammary epithelial cell line", pages 268-272, see the abstract
- Cell, vol. 33, no. 2, June 1983 M.G. Roth et al.: "Influenza virus hemagglutinin expression is polarized in cells infected with recombinant SV40 viruses carrying cloned hemagglutinin DNA", pages 435-443, see the abstract